ATTACHMENT A

STATEMENT OF WORK

EASTERN MICHAUD FLATS SUPERFUND SITE
- FMC PLANT OU -

SUPPLEMENTAL REMEDIAL INVESTIGATION AND FEASIBILITY STUDY

OCTOBER 2003

1. INTRODUCTION

The Eastern Michaud Flats Superfund (EMF) Site is located in Southeastern Idaho, approximately 2.5 miles northwest of Pocatello, Idaho. The EMF site was listed on the National Priority List (NPL) on August 30, 1990. The EMF site includes two adjacent phosphate production facilities, the FMC Plant and the J.R. Simplot "Don" Plant. Most of the FMC facility is within the boundary of the Ft. Hall Reservation on privately-owned fee land. The site encompasses the areal extent of contamination at and from both plants and impacted off-plant areas as identified in the Remedial Investigation (RI) for the site.

EPA issued a Superfund Record of Decision (ROD) for the EMF site in 1998.[1] EPA received comments from the Shoshone-Bannock Tribes that were not supportive of the ROD, mainly regarding the FMC Plant OU and the off-plant areas. The site was subsequently divided into three operable units (OUs); the FMC Plant OU[2], the Simplot Plant OU, and the Off Plant OU. Although EPA negotiated separate consent decrees both with Simplot and FMC for RD/RA work at their respective OUs, the fact that there were only minor comments regarding the Simplot Plant actions identified in the ROD caused EPA to proceed with entry of a Consent Decree for only the Simplot Plant OU. The FMC Plant OU will be studied under this AOC/SOW. Once the work is completed under this SOW, EPA will issue a ROD Amendment that will be specific to the FMC Plant OU. The ROD Amendment will be presented to the public in a proposed plan for public review and comment. The Off-Plant OU will be addressed separately.

2. BACKGROUND

The FMC and Simplot facilities were operating manufacturing plants when EPA selected a remedy in 1998. The ROD assumed that the most likely future land use at each facility was continued industrial use, with each company operating its facility and controlling exposures to hazardous substances, pollutants, and contaminants in accordance with environmental requirements applicable to ongoing manufacturing operations.

FMC ceased production of elemental phosphorus from phosphate ore at the facility in December 2001. FMC has initiated activities to decommission the facility and is evaluating potential commercial/industrial redevelopment of the site. FMC facility air emissions related

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1 The 1998 ROD selected capping as the preferred remedy for the "Old Phossy Waste Ponds" and the "Old Calciner Pond Solids Storage Area" of the FMC Plant OU to reduce the potential for precipitation infiltration and exposure to contaminated soils and waste materials. The ROD also requires FMC to extend the lining of the Railroad Swale at least 830 feet or replace it. The ROD also selected groundwater monitoring and contingent groundwater extraction for hydraulic control. The ROD requires FMC to implement land use restrictions that a) prevent ingestion of groundwater containing site-related constituents above MCLs or risk-based concentrations, b) prevent future residential use of the FMC Plant OU, and c) require that future office buildings be constructed using radon control methods specified in an EPA guidance document titled Radon Prevention in the Design and Construction of Schools and Other Large Buildings.

2 The FMC Plant OU consists of the Pocatello plant site and other FMC properties adjacent to the plant site (see Attached Figure 1).

to operations ceased in December 2001 with the exception of minor sources (e.g., boilers) related to decommissioning activities. FMC terminated the industrial wastewater (IWW) discharge to the Portneuf River in August 2002 and, at FMC's request, EPA subsequently terminated the associated NPDES permit.

The FMC facility contains hazardous waste management units regulated under the Resource Conservation and Recovery Act (RCRA) that are closing under RCRA and that in many cases require post-closure care. As of November 2002, FMC has completed closure at two of the RCRA-regulated ponds (Pond 8S and Pond 9E) and initiated closure at all the remaining RCRA-regulated ponds. FMC agreed to a consent order with the State of Idaho Department of Environmental Quality (IDEQ) on July 8, 2002 to implement remedial action for the calciner ponds, located on State-jurisdiction land in the eastern portion of the FMC facility. A Remedial Action Plan for the calciner ponds was submitted to IDEQ in December 2002 in accordance with the IDEQ consent order.

The cessation of phosphate ore processing at the FMC facility and its potential future industrial or commercial redevelopment have led EPA to issue this AOC and SOW for a supplemental remedial investigation and feasibility study (SRI/SFS). This additional work will allow EPA to ensure that the appropriate cleanup requirements are established in the ROD amendment to protect human health and the environment compatible with potential future commercial/industrial use. As illustrated in Figure 2, the tasks to be performed include:

- EPA and FMC will scope and plan the tasks necessary to efficiently complete the Supplemental RI/FS.
- FMC will update the conceptual site model for potential exposure to contaminants to reflect current site conditions and potential future use of the FMC Plant OU.
- FMC will propose a risk-based concentration (RBC) for elemental phosphorus (toxicity reference values for this constituent were not available at the time of the baseline Human Health Risk Assessment).
- FMC will review previous reports and data to identify data gaps.
- Documents to be reviewed include the RI Report, the Baseline Human Health Risk Assessment, Ecological Risk Assessment and the FS Report.
- FMC will submit a *Remedial Investigation Update Memorandum* documenting these efforts for EPA review and approval.
- FMC will submit a *Work Plan for a Supplemental Remedial Investigation* to EPA for review and approval. This work plan will include an addendum to or revision of the RI Sampling and Analysis Plan (Bechtel, 1992a), Data Management Plan (Bechtel, 1992c), and Health and Safety Plan (Bechtel, 1992b), as relevant, prepared in accordance with EPA guidelines. Following approval, FMC will implement the supplemental remedial investigation and submit a *Supplemental Remedial Investigation Report* for EPA review and approval.

- FMC will review and update as necessary the remedial action objectives (RAOs).
- FMC will submit a *Work Plan for a Supplemental Feasibility Study* to EPA for review and approval. This plan will outline procedures to update the set of applicable or relevant and appropriate requirements (ARARs) used to establish remedial action objectives (RAOs) for the FMC Plant OU in 1998. The plan will also outline procedures to evaluate and propose remedial alternatives for any areas or conditions at the FMC Plant OU that the SRI or other information developed subsequent to the RI Report identifies as not meeting RAOs.
- FMC will perform a supplemental feasibility study (SFS) of remedial action alternatives for those areas or conditions that do not meet RAOs. The purpose of the SFS is to supplement the existing FS based on any new information and apply the detailed analysis of remedial alternatives for the sites grouped with similar contaminants and risk. As with many Superfund feasibility studies, once the general response actions are assessed only a limited set of remedial alternatives may be feasible for the given situation. Consequently, the following general response actions will be evaluated - no action and application of a remedial action technology selected for similar site conditions in the 1998 ROD[3].
- It is anticipated that the SFS will focus on the Soils/Solids Media, including the soils/solids to groundwater pathway, because the air and groundwater pathways were evaluated on a site-wide basis in the 1997 feasibility study[4].
- The evaluation of the implementability of each alternative will include consideration of potential commercial/industrial redevelopment plans[5] for the site. Where appropriate, the SFS will identify time-critical removal actions and other early actions that might be completed to support potential industrial redevelopment or to address other site conditions.
- FMC will submit a *Supplemental Feasibility Study Report* for EPA review and approval. A preferred alternative for the FMC Plant OU that incorporates any additional remedial actions identified in the SFS Report will also be proposed for EPA review.

Previous work plans and reports, including the RI Report, FS Report, and Baseline Risk Assessment will be referenced, where feasible, to minimize the amount of additional documentation. Along with the Administrative Record, the RI Report, FS Report, Baseline Risk Assessment, and Supplemental RI and FS Reports, as approved by EPA, will form the

[3] Remedies selected in the 1998 ROD will be considered to be de facto remedies where site conditions (i.e., COCs and risks) are comparable. EPA guidelines for remedy selection available at www.epa.gov/superfund/action/guidance/remedy/remedies will be consulted, where appropriate, in the event that site conditions not addressed in the 1998 ROD are encountered.

[4] FMC provided to EPA a summary of post-RI groundwater monitoring data collected by FMC (Bechtel 2002). These data were consistent with the data presented in the RI Report.

[5] Consideration is being given to heavy and light industrial and manufacturing uses on the plant site, including potentially an ethanol production plant and a power generation plant, and light industrial, manufacturing and commercial uses on other portions of the FMC property.

basis for the selection of the Site's remedy and will provide the information necessary to support the development of the amended ROD.

At the completion of the Supplemental RI/FS, EPA will select the remedy and document this selection in an amended Record of Decision (ROD). The remedial action alternative selected by EPA will meet the cleanup standards specified in Section 121 of CERCLA. That is, the selected remedial action will be protective of human health and the environment, will be in compliance with, or include a waiver of, applicable or relevant and appropriate requirements of other laws, will be cost-effective, will utilize permanent solutions and alternative treatment technologies to the maximum extent practicable, and will address the statutory preference for treatment as a principal element.

As specified in Section 104(a)(1) of CERCLA, EPA will provide oversight of FMC's activities throughout the SRI and SFS. FMC will support EPA's initiation and conduct of activities related to the implementation of oversight activities. FMC will conduct all work in accordance with this Statement of Work, the Guidance for Conducting Remedial Investigations and Feasibility Studies Under CERCLA (U.S. EPA, Office of Emergency and Remedial Response, October 1988), and any other guidance that EPA typically uses in conducting an RI/FS (a list of the primary guidance documents is attached), as well as any additional requirements specified by the Administrative Order on Consent (AOC), U.S. EPA Docket Number ___, under which the SRI and SFS will be conducted and to which this SOW is an attachment. The RI/FS Guidance describes the report formats and the required report content. FMC will furnish all necessary personnel, materials, and services needed, or incidental to, performing the SOW, except as otherwise specified in the AOC.

3. MEETING PARALLEL RCRA REQUIREMENTS

The FMC Pocatello facility includes ponds and other units where materials that constitute hazardous waste under the Resource Conservation and Recovery Act (RCRA) have been disposed of or stored for more than 90 days. Hazardous waste treatment, storage or disposal (TSD) facilities must apply for a RCRA permit authorizing such activities. FMC accordingly has submitted a RCRA permit application to EPA Region 10 for hazardous waste storage and disposal. The facility currently operates under RCRA interim status authorization. FMC's application for a RCRA operating and post-closure permit currently is pending at EPA Region 10.

TSD facilities that have applied for a RCRA permit are subject to corrective action requirements. EPA regulations state that RCRA permit applicants "must institute corrective action as necessary to protect human health and the environment for all releases of hazardous waste or constituents from any solid waste management units at the facility. . . ." 40 C.F.R. §264.101(a). This parallels the CERCLA requirement that remedial action at NPL sites must protect human health and the environment with respect to actual or threatened releases of hazardous substances, pollutants or contaminants. See CERCLA §121(d), 42 U.S.C. §9621(d).

The CERCLA remedial action and RCRA corrective action programs have similar requirements regarding site investigation and evaluation of remedial alternatives, both based on CERCLA procedures promulgated at 40 C.F.R. Part 300. With respect to cleanup standards, CERCLA requirements are no less stringent than those under RCRA.

Recognizing that CERCLA remedial action and RCRA corrective action involve similar investigations and have similar remedial objectives, EPA has established a policy to make these two programs equivalent. A September 24, 1996 memorandum from EPA Assistant Administrators Steven Herman and Elliot Laws entitled "Coordination between RCRA Corrective Action and Closure and CERCLA Site Activities" states "Generally, cleanups under RCRA corrective action or CERCLA will substantively satisfy the requirements of both programs.... For example, there should be no need to review or repeat those investigations or studies under another program." This policy is being further defined and expanded in the EPA "One Cleanup Program Initiative." The goal of this policy is to avoid duplication of effort and program-related cleanup delays at sites where both programs apply. It accomplishes this goal by making site investigations and remedial action functionally equivalent under CERCLA and RCRA so that, regardless of which program takes the lead, work done under the supervision of one program will meet the requirements of the other.

The FMC Plant OU is a site where both CERCLA remedial action and RCRA corrective action requirements apply. Consistent with the "One Cleanup Program Initiative," it is the intent of the parties that the SRI and SFS and the ROD Amendment will meet not only CERCLA but also RCRA requirements for the areas and conditions that will be evaluated. FMC will coordinate with EPA and other stakeholders to assure that not only this SRI and SFS but also the FMC Plant OU remedial action as a whole satisfies both remedial action and corrective action requirements. This will be accomplished by following the guidelines of the "One Cleanup" policy. FMC also will coordinate with EPA and other stakeholders to clarify to the public that the remedial action specified in the ROD Amendment for the FMC Plant OU is designed to meet not only CERCLA but also RCRA requirements.

This substantive equivalency will not override RCRA procedural requirements, however. Any public review that RCRA prescribes, such as the right to notice and comment regarding any RCRA Part B permit that specifies the corrective action required at the FMC facility, will continue to be afforded. This will provide the public a second notice and opportunity to comment regarding corrective action at the facility. Assuming the corrective action listed in any Part B permit or other RCRA document tracked the remedial action requirements listed in the ROD Amendment, it would already have been subject to public notice and comment in the CERCLA context.

4. TASK DESCRIPTIONS

The tasks to be performed in addressing the Supplemental RI/FS objectives are described in this section.

TASK 1 – ESTABLISH THE OBJECTIVES OF THE SUPPLEMENTAL REMEDIAL INVESTIGATION AND FEASIBILITY STUDY

1.1 Scoping and planning the Supplemental RI/FS.

Scoping is the initial planning process and is initiated by EPA. During this time, the following site-specific objectives for the Supplemental RI/FS will be revised as necessary as determined by EPA. Scoping will be continued, repeated as necessary, and refined through the Supplemental RI/FS process. In addition to developing the site-specific objectives of the Supplemental RI/FS, EPA will determine a general management approach for the site. FMC will document the results of this scoping activity in a *Supplemental RI/FS Scope and Planning Memorandum*. The site-specific objectives for the FMC Plant OU may include the following:

1) Ensure that all areas of the site have been adequately characterized and that CERCLA remedial actions are consistent with closures/remedial actions at other areas of the site where requirements/actions are already in progress;
2) Identify areas that pose unacceptable risk;
3) Attain cleanup of hazardous substances, pollutants, and contaminants released to the environment posing risk and control further releases to assure protection of human health and the environment;
4) Minimize the need for long-term care and maintenance; and,
5) Conduct actions compatible with future land use and development needs.

The strategy for the general management of the FMC Plant OU will be to apply EPA's One Cleanup Program Initiative and integrate redevelopment needs into the remedy selection process. Specific steps include:

1) Update the RI/FS to reflect current status of the plant and data obtained after the 1997 RI/FS including the conceptual site model (CSM), identify former working areas at the plant that were excluded from the 1998 ROD, review and update the applicable and relevant and appropriate requirements (ARARs);
2) Conduct supplemental investigation at any areas for which characterization data are necessary to determine appropriate remedial alternatives;
3) Evaluate remedial alternatives for areas that pose unacceptable risk and propose preferred remedial actions to mitigate risk.

When scoping the specific aspects of the Supplemental RI/FS, FMC will meet with EPA to discuss all project planning decisions and special concerns. FMC shall perform the project planning activities, including those tasks described below under Tasks 1.2 through 1.5. Existing investigation and feasibility study work will be referenced to the extent possible. FMC will meet with EPA before drafting deliverables and/or at the conclusion of each major phase of the Supplemental RI/FS to ensure that the site-specific objectives identified above are met.

1.2 Update the Conceptual Site Model and identify former working areas at the plant excluded from the ROD.

A conceptual site model (CSM) for potential human exposure to contaminants from the Eastern Michaud Flats Site was presented in Sections 1.3 of the Baseline Human Health Risk Assessment (HHRA) and in Section 6.1 of the ROD. This model identified current and/or potential future exposure pathways through which current and potential future site workers and nearby residents could be exposed to site-related contamination.

In light of the cessation of phosphate ore processing at the FMC facility and its potential redevelopment, the CSM will be updated to identify potential exposure pathways under current site conditions and potential future commercial/industrial use of the FMC Plant OU. This review will include consideration of areas already evaluated during the RI/FS and 1998 ROD, but will focus primarily on former working areas of the plant that were excluded from the RI/FS and June 1998 ROD. The operational history of each former working area will be evaluated to determine if there are exposure pathways or site-related constituents that were not evaluated during the RI.

Areas of the FMC facility listed in Table J-1 of FMC's RCRA Part B Permit Application (as amended September 2002) will be reviewed to identify former working areas to be addressed in the Supplemental RI/FS.

Certain RCRA less than 90-day hazardous waste generator accumulation areas (GAA) are in operation to support facility decommissioning and demolition activities. As required by the RCRA hazardous waste management standards, these GAAs are designed and operated to prevent releases. Moreover, these units will be closed by waste removal and equipment decontamination. Potential releases from these units are encompassed within the scope of the Supplemental RI/FS, but closure, including any necessary decontamination, will be addressed pursuant to RCRA requirements.

1.3 Compile data regarding the nature and extent of contamination for pathways and former working areas not previously evaluated.

Information available from the EMF remedial investigation, subsequent groundwater quality monitoring conducted under FMC's RCRA program, and FMC's voluntary post-RI CERCLA groundwater monitoring program will be evaluated to assess the nature and extent of site-related impacts associated with any new exposure pathways and former working areas

identified under Task 1. Characterization data will be compared with background levels described in the ROD to identify the site-related impacts within the FMC Plant OU.

1.4 Develop an RBC for elemental phosphorus

EPA has calculated risk-based concentrations (RBCs) for constituents of concern for commercial/industrial site conditions for the FMC Subarea (see Table 2.3-1 in the FS Report). These RBCs were used in the 1997 feasibility study to screen source materials and soils for evaluation of remedial action. Elemental phosphorus (P4) was identified as a constituent of potential concern in the RI. However, an RBC for elemental phosphorus was not developed in the Baseline Human Health Risk Assessment (HHRA) due to be absence of toxicity reference values at that time. Since then, EPA has published a toxicity reference value for P4. FMC will propose an RBC for P4 to serve as an additional screening criterion. FMC will follow the methodology used by EPA in the existing HHRA and the updated conceptual site model for a relevant future worker exposure scenario in developing the RBC for P4.

1.5 Update the Remedial Investigation Report

The information developed under Tasks 1.2, 1.3, and 1.4 will be documented and submitted to EPA in a Draft Remedial Investigation Update Memorandum. The Draft Remedial Investigation Update Memorandum will include:

1) Comparing the site characterization data compiled under Task 1.3 to the existing RBCs (along with the RBC developed for P4) as a preliminary screen to identify areas potentially requiring additional characterization. For areas in which the site characterization data exceed RBCs, the risks associated with these areas will be evaluated in the Supplemental Feasibility Study;
2) Identify and document the rationale for excluding any areas from further evaluation in the Supplemental RI/FS (such as RCRA-regulated pond closures and the IDEQ-lead calciner ponds remediation, and areas with sufficient data to support a no further action recommendation for a future worker exposure scenario[6]);
3) Identify areas for which data gaps exist and identify data needs for these areas that will be included in the Supplemental RI;
4) Identify and document characterization data for areas where adequate data exists to proceed with evaluation in the Supplemental FS; and,

[6] FMC is required to record deed restrictions on FMC properties in accordance with Sections 10.2.3 and 10.2.3.1 of the 1998 ROD. These restrictions prohibit future residential uses of FMC properties and domestic use of contaminated groundwater. These restrictions also require future office buildings to be constructed using the radon control methods specified in Section 10.2.3.1 of the ROD. These land use restrictions will be used in any additional conceptual site model or remedial action to be evaluated under the Supplemental RI/FS.

5) Assess potential ecological risks within undeveloped areas of the FMC Plant OU for the three chemicals of concern (cadmium, fluoride, and zinc) that were quantitatively evaluated in the Ecological Risk Assessment (E&E, 1995), as well as for vanadium and chromium. The exposure estimates of the Ecological Risk Assessment for the Bannock Hills SW sampling station together with updated site-specific toxicity reference values (TRVs) applicable to arid west systems will be used to characterize on-site risks for cadmium, fluoride and zinc. For vanadium and chromium, a screening ecological assessment will be performed by developing site-specific wildlife TRVs for these constituents and comparing them to estimated on-site concentrations.

Following comment by EPA, FMC will submit a final *Remedial Investigation Update Memorandum* that satisfactorily addresses EPA's comments for EPA approval.

TASK 2 – PERFORM A SUPPLEMENTAL REMEDIAL INVESTIGATION

2.1 Submit a work plan for a supplemental remedial investigation.

A draft *Work Plan for a Supplemental Remedial Investigation* will be submitted for EPA review and approval to address any data gaps identified under Task 1.2. This work plan will include an addendum to or revision of the RI sampling and analysis plan (Bechtel, 1992a), data management plan (Bechtel, 1992c), and health and safety plan (Bechtel, 1992b), as relevant, prepared in accordance with EPA guidelines.

The Work Plan will include a detailed description of the tasks to be performed, information needed for each task, information to be produced during and at the conclusion of each task, and a description of the work products that will be submitted to EPA. FMC is responsible for fulfilling additional data and analysis needs identified by EPA consistent with the general scope and objectives of the Supplemental RI/FS.

Following comment by EPA, FMC will submit a final *Work Plan for a Supplemental Remedial Investigation* that satisfactorily addresses EPA's comments for EPA approval.

2.1.1 Supplemental Remedial Investigation Sampling and Analysis Plan

FMC will prepare an addendum to, or revise, the RI Sampling and Analysis Plan (SAP) to ensure that sample collection and analytical activities are conducted in accordance with technically acceptable protocols and that the data meet data quality objectives (DQOs). The SAP provides a mechanism for planning field activities and consists of a field sampling plan (FSP) and a quality assurance project plan (QAPP). FMC will submit the addendum or revised RI SAP for EPA review and approval.

The FSP will define in detail the sampling and data-gathering methods that will be used for the Supplemental RI. It will include sampling objectives, sample location and frequency, sampling equipment and procedures, and sample handling and analysis.

The QAPP will describe the project objectives and organization, functional activities, and quality assurance and quality control (QA/QC) protocols that will be used to achieve the desired data quality objectives (DQOs). The DQOs will, at a minimum, reflect use of analytic methods to identify contamination and remediate contamination consistent with the levels for remedial action objectives identified in the proposed National Oil and Hazardous Substances Pollution Contingency Plan (NCP), pages 51425-26 and 51433 (December 21, 1988). In addition, the QAPP will address sampling procedures, sample custody, analytical procedures, data reduction, validation, and reporting, and personnel qualifications in accordance with current EPA guidance.

FMC will demonstrate, in advance and to EPA's satisfaction, that each laboratory it may use is qualified to conduct the proposed work. This includes use of methods and analytical protocols for the chemicals of concern in the media of interest within detection and quantification limits consistent with both QA/QC procedures and DQOs approved in the QAPP for the Site by EPA. The laboratory must have and follow an approved QA program. If a laboratory not in the Contract Laboratory Program (CLP) is selected, methods consistent with CLP methods that would be used at this Site for the purposes proposed and QA/QC procedures approved by EPA will be used. If the laboratory is not in the CLP program, a laboratory QA program must be submitted for EPA review and approval. EPA may require that FMC submit detailed information to demonstrate that the laboratory is qualified to conduct the work, including information on personnel qualifications, equipment, and material specifications. FMC will provide assurances that EPA has access to laboratory personnel, equipment, and records for sample collection, transportation, and analysis.

2.1.2 Supplemental Remedial Investigation Health and Safety Plan

A Health and Safety Plan (HSP) will be prepared or the existing HSP modified in conformance with FMC's Health and Safety Program, and in compliance with OSHA regulations and protocols. The HSP will include the eleven (11) elements described in the RI/FS Guidance. It should be noted that EPA does not "approve" FMC's Health and Safety Plan, but rather EPA reviews it to ensure that all necessary elements are included, and that the Plan provides for the protection of human health and the environment.

2.2 Perform a Supplemental Remedial Investigation.

Following EPA approval of the *Work Plan for a Supplemental Remedial Investigation*, FMC will implement the supplemental remedial investigation. The supplemental investigations or studies will be performed to further characterize the impact at former working areas, risks associated with potential future industrial redevelopment of the site, and /or to obtain data needed to evaluate remedial action alternatives. Investigations or studies will be performed

in accordance with EPA quality guidelines (EPA 1994, 1997a, 2001). A *Supplemental Remedial Investigation Report* will be submitted for EPA review and approval.

The draft *Supplemental Remedial Investigation Report* will provide all findings from the Supplemental RI sampling. The draft *Supplemental Remedial Investigation Report* shall provide tabulated data and figures showing sample locations and shall include as appendices the validated analytical results, field data, field observations and logs, sample location coordinates and all other SRI information. An electronic copy of the *Supplemental Remedial Investigation Report*, including appendices, shall also be provided, in a format acceptable to EPA. Following comment by EPA, FMC will submit a *Supplemental Remedial Investigation Report* that satisfactorily addresses EPA's comments for EPA approval.

TASK 3 – PERFORM A SUPPLEMENTAL FEASIBILITY STUDY OF REMEDIAL ACTION ALTERNATIVES

3.1 Submit a work plan for a Supplemental Feasibility Study.

FMC will submit a draft *Work Plan for a Supplemental Feasibility Study* for EPA review and approval. This plan will outline procedures to update the set of ARARs and remedial action objectives (RAOs) for the FMC Plant OU. The RAOs established by EPA in the ROD were based on the facility-wide remedial investigation of site conditions, baseline risk assessment, and evaluation of ARARs described in the FS Report (FMC 1997). These RAOs, reproduced in Table 1, established performance requirements for the remedial action alternatives evaluated in the FS Report. The RAOs identified in Table 1 may require modification.

The Work Plan will include a description of the work to be performed, including the methodologies to be utilized, as well as a schedule for completion consistent with this AOC. In addition, the Work Plan must include the rationale for performing the required activities. The WP will include the CSM developed in Task 1.2 above, identify COCs, and identify RBCs for each COC, and a process for and manner of identifying any new ARARs (chemical-specific, location-specific, and action-specific).

The work plan will describe how ARARs and RAOs will be reviewed and updated to ensure that they remain appropriate for evaluating former working areas of the plant and in establishing a protective basis for potential industrial redevelopment of the FMC Plant OU. This will include identification of an RAO for elemental phosphorus. The applicability of the Health and Environmental Protection Standards for Uranium and Thorium Mill Tailings (40 C.F.R. Part 192) to the slag pile will be included in this review.

3.2 Perform a Supplemental Feasibility Study of remedial action alternatives.

Following EPA approval of the *Work Plan for a Supplemental Feasibility Study*, existing data and data obtained during the supplemental remedial investigation will be evaluated to assess the need for remedial action to control risks to human health and the environment. A supplemental feasibility study of remedial action alternatives will be performed for areas that

do not meet RBCs. A comprehensive evaluation of 12 remedial action alternatives to implement the RAOs for the FMC Plant OU has already been performed and is documented in the FS Report for the FMC Subarea (FMC 1997). The supplemental feasibility study will utilize the conclusions of this analysis in evaluating remedial action alternatives for the former working areas of the plant that exhibit similar site conditions. EPA guidelines for remedy selection available at EPA's web site[7] will be consulted, where appropriate, in the event that site conditions not addressed in the existing FS are encountered.

The Supplemental FS will evaluate the remedial action alternatives against the nine criteria[8] identified in the NCP (40 C.F.R §300.430 (e)(9)), analyze the alternatives comparatively - that is, each alternative will be compared against the others using the evaluation criteria as a basis of comparison - and recommend an alternative for EPA consideration. The report will identify time-critical removal actions and other early actions that can be taken in support of anticipated industrial redevelopment of the site, should this be likely to occur before the ROD amendment can be finalized, or to address other site conditions.

Cost estimates will be developed for the remedial action alternatives. The evaluation of the implementability of each alternative will include consideration of potential redevelopment plans for the site.

FMC will submit a draft *Supplemental Feasibility Study Report* for EPA review and comment. FMC will submit a final *Supplemental Feasibility Study Report* to EPA that addresses EPA comments.

5. COMMUNITY RELATIONS

FMC shall update the community relations plan to include any redevelopment plan and outreach activities that FMC intends to initiate in order to engage the community in remedy selection and the site redevelopment process. FMC will submit the updated community relations plan for EPA review and approval no later than the schedule for submittal of the Remedial Investigation Update Memorandum consistent with Section 6 (Deliverables) of this SOW.

6. DELIVERABLES

FMC shall conduct activities and submit deliverables for EPA review, comment, approval, or modification. By reference, this SOW is an enforceable part of the AOC. All work shall be conducted in accordance with the requirements of CERCLA, the NCP, and all applicable EPA guidance. Upon written approval, FMC may combine specified deliverables into one or more documents. All work shall be in accordance with the schedules, standards,

[7] www.epa.gov/superfund/action/guidance/remedy/remedies

[8] Threshold Criteria: Overall protection of human health and the environment; compliance with ARARs. Primary Balancing Criteria: short-term effectiveness; long-term effectiveness and permanence; reduction of toxicity, mobility or volume; implementability; cost. Modifying Criteria: State and Tribal acceptance; community acceptance.

specifications, and other requirements of this SOW and the Order as initially approved or modified by EPA, or as amended or modified by EPA. For each deliverable listed below, if EPA disapproves or requires modification or revision of any deliverable, in whole or in part, FMC shall submit a modified or revised version thereof to EPA which is responsive to all EPA directions, comments, or requirements within forty-five (45) days after receiving such directions, comments or requirements from EPA, unless a shorter or longer time is specified by EPA. EPA disapproval, modifications, or revisions required pursuant to this paragraph must be in writing.

1. Within thirty (30) days after the effective date of this order FMC shall submit the RI/FS Scope and Planning Memorandum for EPA review and approval.
2. Within ninety (90) days after EPA approval of the RI/FS Scope and Planning Memorandum, FMC shall submit the Remedial Investigation Update Memorandum for EPA review and approval.
3. Within ninety (90) days after EPA approval of the RI/FS Scope and Planning Memorandum, FMC shall submit the updated community relations plan for EPA review and approval.
4. Within sixty (60) days after EPA approval of the RI Update Memorandum, FMC shall submit the Work Plan for a Supplemental Remedial Investigation for EPA review and approval.
5. Within ninety (90) days (or 120 days if field investigation and sampling activities occur during the winter season) after EPA approval of the Supplemental Remedial Investigation Work Plan, FMC shall submit the Supplemental Remedial Investigation Report for EPA review and approval.
6. Within sixty (60) days after EPA approval of the Supplemental Remedial Investigation Report, FMC shall submit the Work Plan for a Supplemental Feasibility Study for EPA review and approval.
7. Within sixty (60) days after EPA approval of the Work Plan for the Supplemental Feasibility Study, FMC shall submit the Supplemental Feasibility Study Report for EPA review and approval.

7. DESIGNATED PROJECT COORDINATORS

All draft and/or final deliverable documents shown in Section 6 (Deliverables) of this SOW and all approvals or disapprovals related to those deliverable documents shall be sent by certified mail, return receipt requested, to the following addressees or to any other addressees that FMC and EPA may designate in writing. Other correspondence, reports, or notices shall be sent by regular mail or fax to these same addressees or to any

other addresses that FMC and EPA may designate. Correspondence shall be submitted in both electronic and paper copy. Groundwater data shall be submitted in a format that will be specified by EPA.

- Four (4) copies to EPA, forwarded to:
  Linda Meyer, MS WCM-121
  U.S. EPA, Region 10
  1200 Sixth Avenue
  Seattle, WA 98101

- One copy to IDEQ, forwarded to:
  Doug Tanner
  Idaho Department of Environmental Quality
  444 Hospital Way #300
  Pocatello, ID 83201

- One copy to the Shoshone Bannock Tribes, forwarded to:
  Roger Turner
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- Two (2) copies to FMC Idaho LLC, forwarded to:
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Table 1
Remedial Action Objectives – FMC Subarea[1]

	Remedial Action Objective
A	Reduce the exposure to radon that would occur in future buildings constructed within the plant area under a future industrial scenario
B	Prevent external exposure to radionuclides in soils at levels that pose estimated excess risk greater than 1x10-4, or site-specific background levels where that is not practical.
C	Prevent ingestion of soils containing Contaminants of Concern (COCs) at levels that pose estimated excess risks above 1x10-4, a non-cancer risk HQ of 1, or site-specific background levels where that is not practical.
D	Reduce the release and migration of COCs to the groundwater from facility sources that may result in concentrations in groundwater exceeding risk-based concentration (RBCs) or chemical specific Applicable or relevant and Appropriate Requirement (ARAR), specifically Maximum Contaminant Levels (MCLs).
E	Prevent potential ingestion of groundwater containing COCs having concentrations exceeding RBCs or MCLs (chemical specific ARARs) (see Table 36). The RBCs shown in Table 36 correspond to a cancer risk of 10-6 or a Hazard Index of 1.0.
F	Restore groundwater that has been impacted by site sources to meet all RBCs or MCLs for the COCs.

[1] Record of Decision for the Eastern Michaud Flat Superfund Site. EPA Region 10, June 1998.

Figure 1

Regional Setting – Reprinted from the 1998 ROD for Eastern Michaud Flats Superfund Site

Figure 2

Decision Tree - SOW for Supplemental RI/FS at the FMC Plant OU

References

Bechtel 1992a. Remedial Investigation/Feasibility Study Sampling and Analysis Plan for the Eastern Michaud Flats Site. Bechtel Environmental, Inc. February 1992.

Bechtel 1992b. Remedial Investigation/Feasibility Study Health and Safety Plan for the Eastern Michaud Flats Site. Bechtel Environmental, Inc. February 1992.

Bechtel 1992c. Remedial Investigation/Feasibility Study Work Plan for the Eastern Michaud Flats Site. Bechtel Environmental, Inc. June 1992.

Bechtel 1996. Remedial Investigation for the Eastern Michaud Flats Site. Bechtel Environmental, Inc. Draft issued September 1995 and revised August 1996.

Bechtel 2002. Revisions to RCRA Corrective Action Environmental Indicators. FMC Idaho LLC. Pocatello, Idaho. Bechtel Environmental, Inc. June 2002.

Ecology & Environment 1996. Baseline Human Health and Ecological Risk Assessments for the EMF Site. Prepared for U.S. Environmental Protection Agency, Region 10. Draft issued March 1995 and revised March 1996.

EPA 1987. Interim Guidance on Compliance with Applicable or Relevant and Appropriate Requirements. U.S. EPA, Office of Emergency and Remedial Response, July 9, 1987, OSWER Directive No. 9234.0-05.

EPA 1988a. CERCLA Compliance with Other Laws Manual. Two Volumes, U.S. EPA, Office of Emergency and Remedial Response, August 1988 (draft), OSWER Directive No. 9234.1-01 and -02.

EPA 1988b. Guidance for Conducting Remedial Investigations and Feasibility Studies Under CERCLA. U.S. EPA, Office of Emergency and Remedial Response, October 1988, OSWER Directive No. 9355.3-01.

EPA 1994. Guidance for the Data Quality Objectives Process. United States Environmental Protection Agency, QA/G-4, EPA/600/R-96/055, September 1994

EPA 1997a. Test Methods for Evaluating Solid Wastes, Physical/Chemical Methods. United States Environmental Protection Agency, SW-846, Third Edition. Final Update III, June 1997.

EPA 1998. Record of Decision. Declaration, Decision Summary, and Responsiveness Summary for Eastern Michaud Flats Superfund Site, Pocatello, Idaho. U.S. Environmental Protection Agency, Region 10. June 1998.

EPA 2001. EPA Requirements for Quality Assurance Project Plans for Environmental Data Operations. Quality Assurance Management Staff. United States Environmental Protection Agency, QA/R-5. March 2001.

EPA 2002. Southeast Idaho Update. U.S. Environmental Protection Agency, Region 10. October 2002.

FMC 1997. Feasibility Study Report for the FMC Subarea of the Eastern Michaud Flats Site. Prepared by Bechtel Environmental, Inc. April 1997.